Lake Erie Harmful Algal Bloom Bulletin

10 October, 2017, Bulletin 26

The *Microcystis* cyanobacteria bloom continues across the western basin, extending from Maumee Bay, along the islands, and to the Ontario coast. Observed winds since last Thursday (10/6-10) promoted an increase in surface concentrations, with scums reported in Maumee Bay. Measured toxin concentrations are below recreational thresholds throughout most of the bloom extent, but exceed the threshold in the western extent of the bloom where it is most dense (appearing green from a boat), and corresponding with areas of dark red and pink in Figure 1.

Forecast winds (5-28kn) today through Thursday (10/10-12) will promote mixing and limit transport of remaining *Microcystis* concentrations. Clouds will likely obscure the lake through Thursday (10/12). Water temperatures are at or below 68˚F (20˚C), limiting the growth of *Microcystis* concentrations in the western basin.

Please check Ohio EPA's site on harmful algal blooms for safety information: http://epa.ohio.gov/habalgae.aspx. NOAA's GLERL provides additional HAB data: https://www.glerl.noaa.gov/res/HABs_and_Hypoxia. Keep your pets and yourself out of the water in areas where scum is present. The persistent cyanobacteria bloom in Sandusky Bay continues. No other blooms are evident in the central or eastern basins. –Keeney, Yang

The images below are "GeoPDF". To see the longitude and latitude under your cursor, select "Tools > Analyze > Geospatial Location Tool".

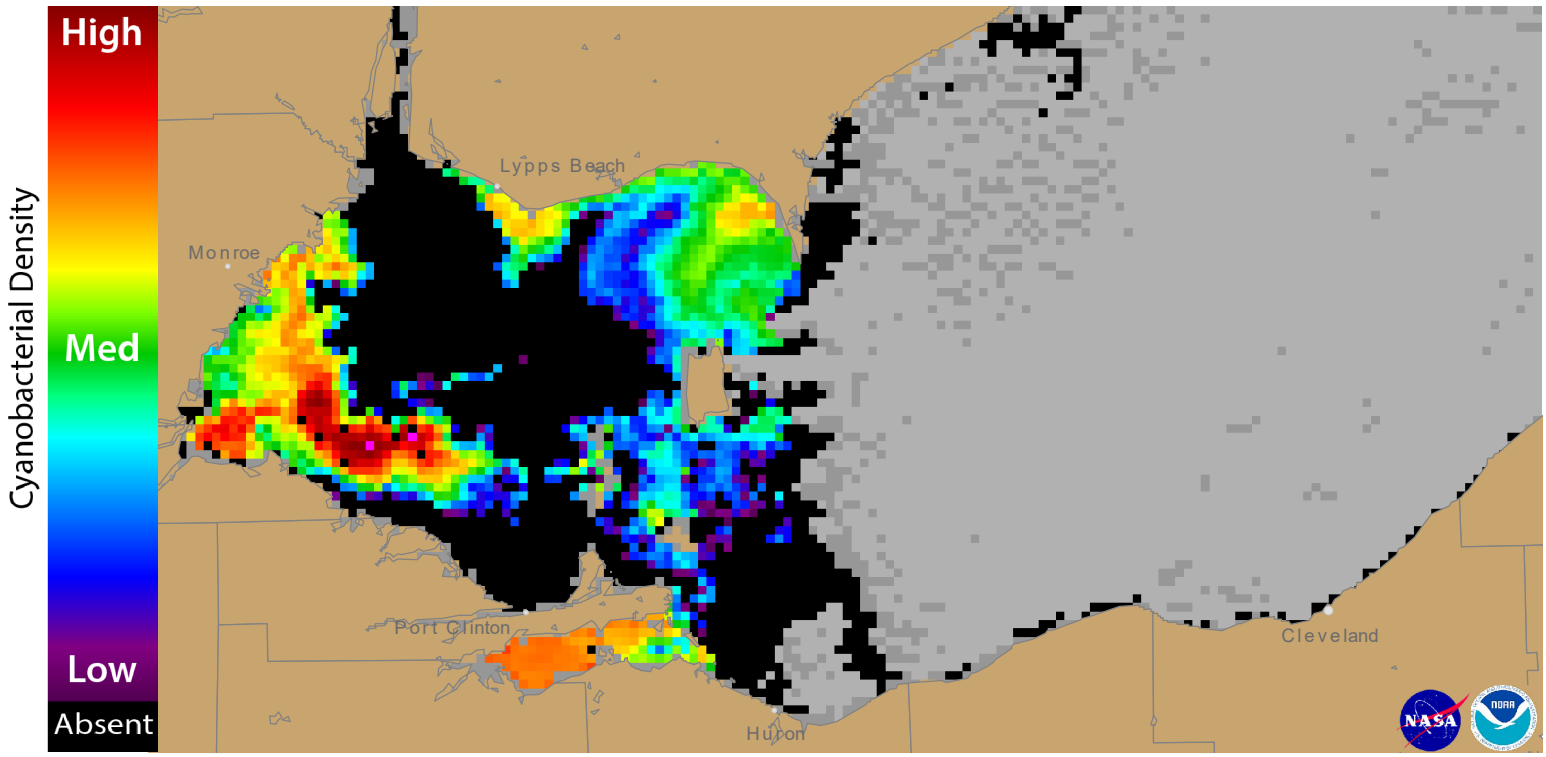


Figure 1. Cyanobacterial Index from NASA MODIS-Aqua data collected 09 October, 2017 at 12:56 EST. Grey indicates clouds or missing data. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.

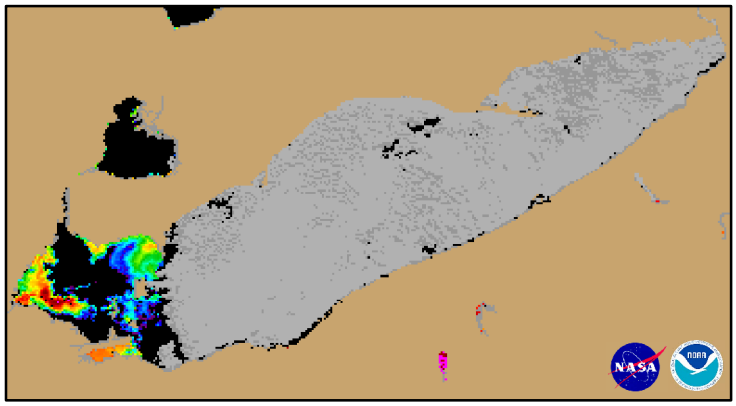
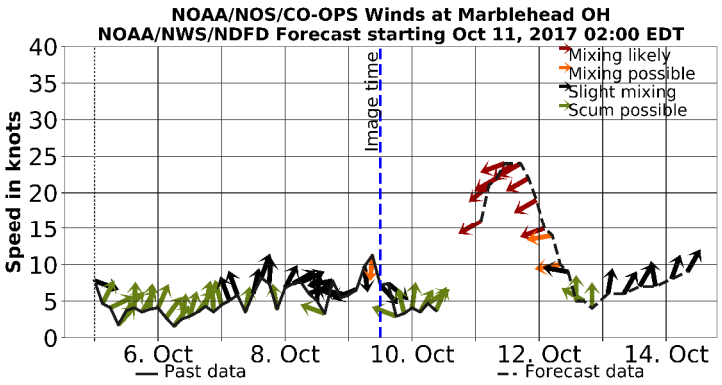


Figure 2. Cyanobacterial Index from NASA MODIS-Aqua data collected 09 October, 2017 at 12:56.



Wind speed and direction from Marblehead, OH. Blooms mix through the water column at wind speeds greater than 15 knots (or 7.7 m/s).

For more information and to subscribe to this bulletin, go to: https://tidesandcurrents.noaa.gov/hab/lakeerie.html

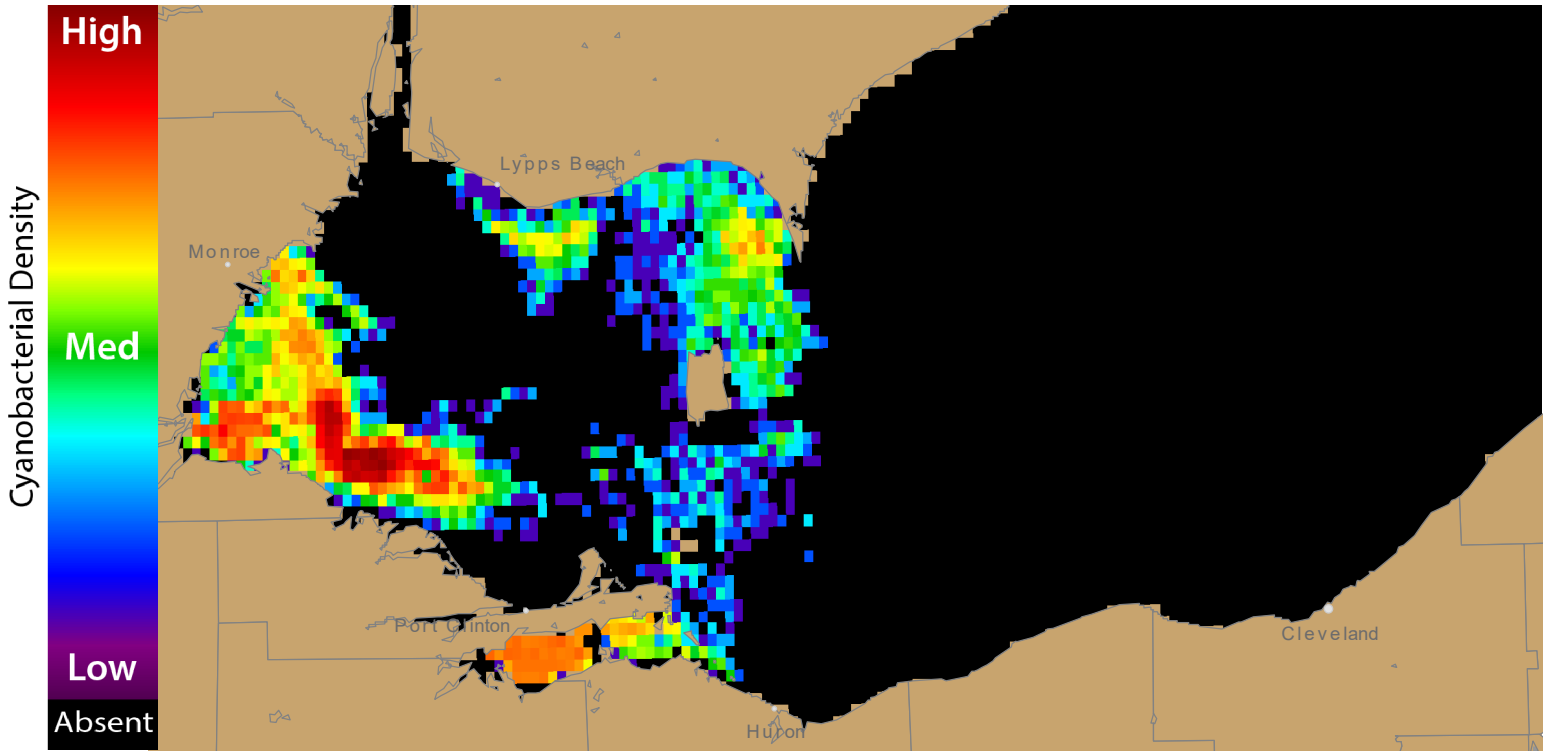


Figure 3. Nowcast position of bloom for 10 October, 2017 using GLFS modelled currents to move the bloom from the 09 October, 2017

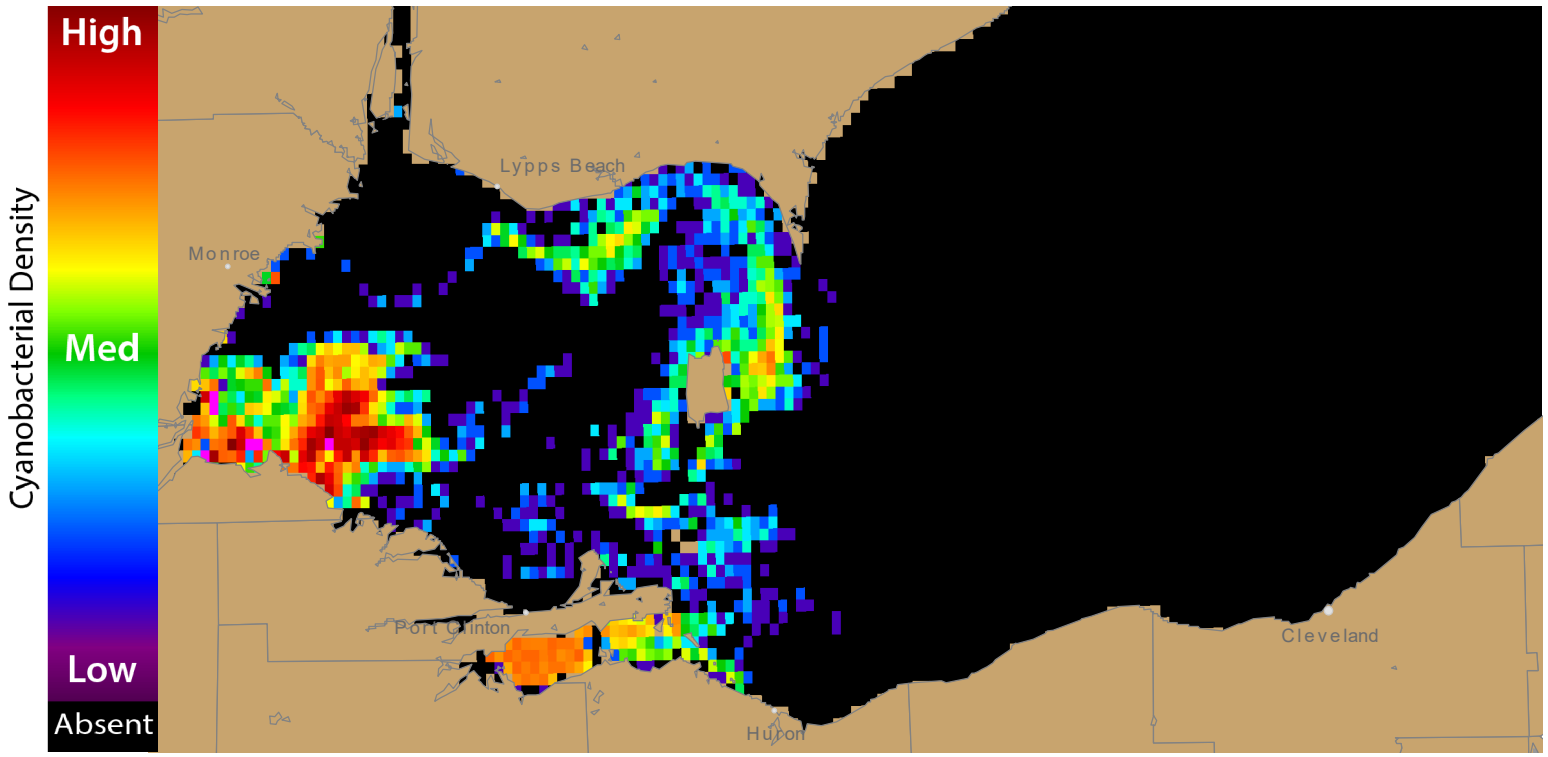
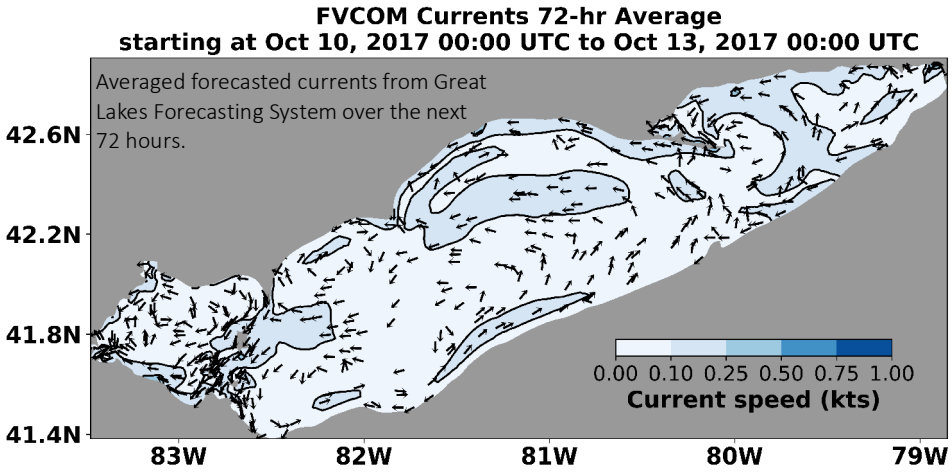


Figure 4. Forecast position of bloom for 13 October, 2017 using GLFS modelled currents to move the bloom from the 09 October, 2017



For more information and to subscribe, please visit the NOAA HAB Forecast page: https://tidesandcurrents.noaa.gov/hab/lakeerie.html